

# Results from experimental trials testing participant responses to White, Hispanic and Black suspects in high-fidelity deadly force judgment and decision-making simulations

Journal of Experimental Criminology June 2013, Volume 9, Issue 2, pp 189–212

#### Authors Authors and affiliations

Lois James, Bryan Vila, Kenn Daratha

Article

First Online: 23 October 2012

DOI (Digital Object Identifier): 10.1007/s11292-012-9163-y

#### Cite this article as:

James, L., Vila, B. & Daratha, K. J Exp Criminol (2013) 9: 189. doi:10.1007/s11292-012-9163-y





Shares Downloads

# **Abstract**

# Objective

Advance the methodological techniques used to examine the influence of suspect race and ethnicity on participant decisions to shoot in an experimental setting.

## Methods

Support

After developing and testing a novel set of 60 realistic, high definition video deadly force scenarios based on 30 years of official data on officer-involved shootings in the United States, three separate experiments were conducted testing police (n = 36), civilian (n = 72) and military (n = 6) responses (n = 1,812) to the scenarios in high-fidelity computerized training simulators. Participants' responses to White,

Black and Hispanic suspects in potentially deadly situations were analyzed using a multi-level mixed methods strategy. Key response variables were reaction time to shoot and shooting errors.

# Results

In all three experiments using a more externally valid research method than previous studies, we found that participants took *longer to shoot Black suspects* than White or Hispanic suspects. In addition, where errors were made, participants across experiments were more likely to shoot unarmed White suspects than unarmed Black or Hispanic suspects, and were more likely to *fail to shoot* armed Black suspects than armed White or Hispanic suspects. In sum, this research found that participants displayed significant bias *favoring* Black suspects in their decisions to shoot.

# Conclusions

The results of these three experiments challenge the results of less robust experimental designs and shed additional light on the broad issue of the role that status characteristics, such as race and ethnicity, play in the criminal justice system. Future research should explore the generalizability of these findings, determine whether bias favoring Black suspects is a consequence of administrative measures (e.g., education, training, policies, and laws), and identify the cognitive processes that underlie this phenomenon.

# Keywords

Police Decision making Suspect race Suspect ethnicity

Research supported by the Defence Advanced Research Projects Agency (109279–001), the National Institute of Justice (2008-IJ-CX-0015), and the Office of Naval Research (DURIP#N000149810802)

#### References

Alpert, G., & Dunham, R. (2010). Policy and training recommendations related to police use of CEDs: overview of findings from a comprehensive national study. *Police Quarterly*, 13(3), 235–259.

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Policy % 20 and % 20 training % 20 recommendations % 20 related % 20 to % 20 police % 20 use % 20 of % 20 CEDs % 3A % 20 overview % 20 of % 20 police % 20 use % 20 of % 20 CEDs % 3A % 20 overview % 20 of % 20 police % 20 use % 20 of % 20 police % 20 use % 20 of % 20 police % 20 use % 20 of % 20 police % 20 use % 20 of % 20 police % 20 use % 20 of % 20 police % 20 use % 20 of % 20 police % 20 use % 20 of % 20 police % 20 use % 20 of % 20 police % 20 use % 20 of % 20 police % 20 use % 20 police % 20 police % 20 use % 20 police % 20 polic

Amodio, D. M., Harmon-Jones, E., & Devine, P. G. (2003). Individual differences in the activation and control of affective race bias as assessed by startle eyeblink response and self-report. *Journal of Personality and Social Psychology*, *84*(4), 738–753.

CrossRef (http://dx.doi.org/10.1037/0022-3514.84.4.738)

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Individual%20 differences%20 in%20 the%20 activation%20 and%20 control%20 of%20 affective%20 race%20 bias%20 ass@20 ass@20 ass@20 ass@20 ass@20 activation%20 and%20 control%20 of%20 affective%20 race%20 bias%20 ass@20 ass@20

Jones&author=PG.%20Devine&journal=Journal%20of%20Personality%20and%20Social%20Psychology&volume=84&issue=4&paths and the control of the contr

Amodio, D. M., Harmon-Jones, E., Devine, P. G., Curtin, J. J., Hartley, S. L., & Covert, A. E.

(2004). Neural signals for the detection of unintentional race bias. Psychological Science,

15(2), 88-93.

CrossRef (http://dx.doi.org/10.1111/j.0963-7214.2004.01502003.x)

Google Scholar (http://scholar.google.com/scholar\_lookup?

 $title=Neural\%20signals\%20for\%20the\%20detection\%20of\%20unintentional\%20race\%20bias\&author=DM.\%20Amodio\&author=I Jones\&author=PG.\%20Devine\&author=JJ.\%20Curtin\&author=SL.\%20Hartley\&author=AE.\%20Covert\&journal=Psychological\%2093\&publication\_year=2004)$ 

Brown, J., & Langan, P. (2001). Policing and Homicide, 1976-98: Justifiable Homicide by

Police, Police Officers Murdered by Felons. U.S. Department of Justice. Washington: Bureau

of Justice Statistics.

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Policing%20and%20Homicide%2C%201976%E2%80%9398%3A%20Justifiable%20Homicide%20by%20Police%2C%20Polic

Campbell, D., & Stanley, J. (1963). Experimental and Quasi-Experimental Designs for

Research. Boston: Houghton Mifflin.

Google Scholar (http://scholar.google.com/scholar\_lookup?title=Experimental%20and%20Quasi-

Experimental%20Designs%20for%20Research&author=D.%20Campbell&author=J.%20Stanley&publication\_year=1963)

Cooper, M. (February 5, 1999). "Officers in Bronx Fire 41 Shots, And an Unarmed Man Is

Killed." The New York Times.

Correll, J., Urland, G. L., & Ito, T. A. (2006). Event-related potentials and the decision to

shoot: the role of threat perception and cognitive control. Journal of Experimental Social

Psychology, 42, 120-128.

CrossRef (http://dx.doi.org/10.1016/j.jesp.2005.02.006)

Google Scholar (http://scholar.google.com/scholar\_lookup?title=Event-

related%20potentials%20and%20the%20decision%20to%20shoot%3A%20the%20role%20of%20threat%20perception%20and%20the%20threat%20perception%20and%20the%20threat%20perception%20and%20the%20threat%20perception%20and%20threat%20and%20threat%20and%20threat%20and%20threat%20and%20threat%20and%20threat%20and%20threat%20and%20threat%20and%20threat%20and%20threat%20and%20threat%20and%20threat%20and%20threat%20and%20threat%20and%20threat%20and%20threat%20and%20threat%20and%20and%20threat%20and%20an

Correll, J., Park, B., Judd, C. M., Wittenbrink, B., Sadler, M. S., & Keesee, T. (2007a). Across

the thin blue line: police officers and racial bias in the decision to shoot. Journal of

Personality and Social Psychology, 92(6), 1006-1023.

<u>CrossRef</u> (http://dx.doi.org/10.1037/0022-3514.92.6.1006)

Google Scholar (http://scholar.google.com/scholar\_lookup?

 $title=Across\%20 the\%20 thin\%20 blue\%20 line\%3A\%20 police\%20 of ficers\%20 and\%20 racial\%20 bias\%20 in\%20 the\%20 decision\%20 to 23 \& publication\_year=2007)$ 

Correll, J., Park, B., Judd, C. M., & Wittenbrink, B. (2007b). Stereotypes and racial bias in

the decision to shoot. European Journal of Social Psychology, 37(6), 1102–1117.

CrossRef (http://dx.doi.org/10.1002/ejsp.450)

Google Scholar (http://scholar.google.com/scholar\_lookup?

 $title=Stereotypes\%20 and \%20 racial\%20 bias\%20 in\%20 the\%20 decision\%20 to\%20 shoot\&author=J.\%20 Correll\&author=B.\%20 Park 1117\&publication\_year=2007)$ 

Deakin, T. (1988). Police Professionalism: The Renaissance of American Law Enforcement.

Springfield, Ill.; Charles C. Thomas.

Eberhardt, J. L., Goff, P. A., Purdie, V. J., & Davies, P. G. (2004). Seeing black: race, crime,

and visual processing. Journal of Personality and Social Psychology, 87, 876–893.

CrossRef (http://dx.doi.org/10.1037/0022-3514.87.6.876)

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Seeing%20black%3A%20race%2C%20crime%2C%20and%20visual%20processing&author=JL.%20Eberhardt&author=PA.%: 893&publication\_year=2004)

Federal Bureau of Investigation, Criminal Justice Information Services Division. (2006).

Violent Encounters: A Study of Felonious Assaults on Our Nation's Law Enforcement

Officers. Washington: U.S. Department of Justice.

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Violent%20 Encounters%3A%20A%20Study%20of%20Felonious%20Assaults%20on%20Our%20Nation%E2%80%99s%20Landers%20Felonious%20Assaults%20Our%20Nation%E2%80%99s%20Landers%20Felonious%20Assaults%20Our%20Nation%E2%80%99s%20Landers%20Felonious%20Assaults%20Our%20Nation%E2%80%99s%20Landers%20Assaults%20Our%20Nation%E2%80%99s%20Landers%20Assaults%20Our%20Nation%E2%80%99s%20Landers%20Assaults%20Our%20Nation%E2%80%99s%20Landers%20Assaults%20Our%20Nation%E2%80%99s%20Landers%20Assaults%20Our%20Nation%E2%80%99s%20Assaults%20Our%20Nation%E2%80%99s%20Assaults%20Our%20Nation%E2%80%99s%20Assaults%20Our%20Nation%E2%80%99s%20Assaults%20Our%20Nation%E2%80%99s%20Assaults%20Our%20Nation%E2%80%99s%20Assaults%20Our%20Nation%20Assaults%20Our%20Nation%20Assaults%20Our%20Nation%20Our%20Nation%20Assaults%20Our%20Nation%20Assaults%20Our%20Our%20Nation%20Our%20Nation%20Our%20Nation%20Our%20Nation%20Our%20Nation%20Our%20Nation%20Our%20Nation%20Our%20Nation%20Our%20Nation%20Our%20Nation%20Our%20Nation%20Our%20Nation%20Our%20Nation%20Our%20Nation%20Our%20Nation%20Our%20Nation%20

Fyfe, J. J. (1978). Shots Fired: An Analysis of New York City Police Firearms Discharges.

PhD dissertation, State University of New York at Albany.

Fyfe, J. J. (1982). Blind justice: police shootings in Memphis. *The Journal of Criminal Law and Criminology*, 73, 702–722.

CrossRef (http://dx.doi.org/10.2307/1143112)

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Blind%20justice%3A%20police%20shootings%20in%20Memphis&author=JJ.%20Fyfe&journal=The%20Journal%20of%20C722&publication\_year=1982)

Fyfe, J. (2000). Urban Policing in Australia and the United States, In Policing Issues, Issue #1, pp. 1–12

Geller, W. A. (1982). Deadly force: what we know. Journal of Police Science and

Administration, 10, 151-177.

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Deadly%20force%3A%20what%20we%20know&author=WA.%20Geller&journal=Journal%20of%20Police%20Science%20ar. 177&publication\_year=1982)

Goldkamp, J. S. (1976). Minorities as victims of police shootings: interpretations of racial

disproportionality and police use of deadly force.". Justice System Journal, 2, 169-183.

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Minorities%20as%20victims%20of%20police%20shootings%3A%20interpretations%20of%20racial%20disproportionality%2183&publication\_year=1976)

Ho, T. (1993). Individual and situational determinants of the use of deadly force: a

simulation. American Journal of Criminal Justice, 18(1), 41-60.

CrossRef (http://dx.doi.org/10.1007/BF02887638)

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Individual%20and%20situational%20determinants%20of%20the%20use%20of%20deadly%20force%3A%20a%20simulation 60&publication\_year=1993)

Honig, A. & Roland, J. (1998). "Shots Fired: Officer Involved." The Police Chief.

Inn, A., Wheeler, A., & Sparling, C. (1977). The effects of suspect race and situation hazard on police officer shooting behavior. *Journal of Applied Social Psychology*, 7(1), 27–37.

CrossRef (http://dx.doi.org/10.1111/j.1559-1816.1977.tb02415.x)

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=The%20effects%20of%20suspect%20race%20and%20situation%20hazard%20on%20police%20officer%20shooting%20beha 37&publication\_year=1977)

Jacobs, D., & O'Brien, R. (1998). The determinants of deadly force: a structural analysis of

police violence. The American Journal of Sociology, 103(4), 837-862.

CrossRef (http://dx.doi.org/10.1086/231291)

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=The%20determinants%20of%20deadly%20force%3A%20a%20structural%20analysis%20of%20police%20violence&author=I 862&publication\_year=1998)

James, G. R., & Pasquale-Styles, M. (2009). Firearm Deaths by Law Enforcement. Journal of

Forensic Sciences, 54(1), 185–188 (Blackwell Publishing Limited).

CrossRef (http://dx.doi.org/10.1111/j.1556-4029.2008.00678.x)

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Firearm%20Deaths%20by%20Law%20Enforcement&author=GR.%20James&author=M.%20Pasquale-

Styles&journal=Journal%20of%20Forensic%20Sciences&volume=54&issue=1&pages=185-

188&publication\_year=2009)

Klinger, D. (2004). Into the Kill Zone: A Cop's Eye View of Deadly Force. San Francisco:

Jossev-Bass.

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Into%20the%20Kill%20Zone%3A%20A%20Cop%E2%80%99s%20Eye%20View%20of%20Deadly%20Force&author=D.%20I

Klinger, D. (2005). Social Theory and the Street Cop: The Case of Deadly Force. Ideas in

American Policing, No. 7. Washington, D.C: Police Foundation.

Google Scholar (http://scholar.google.com/scholar\_lookup?

title = Social%20 Theory%20 and%20 the%20 Street%20 Cop%3A%20 The%20 Case%20 of%20 Deadly%20 Force.%20 Ideas%20 in%20 And Case%20 in%20 Ideas%20 in%20 And Case%20 in%20 Ideas%20 in%20 Ideas%20 in%20 Ideas%20 Ideas%20 in%20 Ideas%20 Ideas%2

Klinger, D., & Brunson, R. (2009). Police officers perceptual distortions during lethal force

situations: informing the reasonableness standard. Criminology and Public Policy, 8(1), 117-

140.

CrossRef (http://dx.doi.org/10.1111/j.1745-9133.2009.00537.x)

Google Scholar (http://scholar.google.com/scholar lookup?

title=Police%20officers%20perceptual%20distortions%20during%20lethal%20force%20situations%3A%20informing%20the%20r140&publication\_year=2009)

Kobler, A. (1975). Figures (and perhaps some facts) on police killing of civilians in the United

States 1965–1969. Journal of Social Issues, 31(1), 185–191.

 $\underline{CrossRef} \ \ (http://dx.doi.org/10.1111/j.1540-4560.1975.tb00750.x)$ 

Google Scholar (http://scholar.google.com/scholar\_lookup?

 $title=Figures\%20\%28 and\%20 perhaps\%20 some\%20 facts\%29\%20 on\%20 police\%20 killing\%20 of\%20 civilians\%20 in\%20 the\%20 Uni 191 \&publication\_year=1975)$ 

Liska, A., & Yu, J. (1992). Specifying and Testing the Threat Hypothesis: Police Use of Deadly

Force. In A. E. Liska (Ed.), Social Threat and Social Control (pp. 53-68). Albany: State

University of New York Press.

Google Scholar (http://scholar.google.com/scholar\_lookup?

 $title=Specifying \% 20 and \% 20 Testing \% 20 the \% 20 Threat \% 20 Hypothesis \% 3A \% 20 Police \% 20 Use \% 20 of \% 20 Deadly \% 20 Force \& author=68 \& publication\_year=1992)$ 

Lopez, R.J. "No evidence Ruben Salazar was targeted in killing, report says." Los Angeles Times, February 19, 2011.

MacDonald, J., Kaminski, R., Alpert, G., & Tennenbaum, A. (2001). The temporal

relationship between police killings of civilians and criminal homicide: a refined version of

the danger-perception theory. Crime & Delinquency, 47, 155-172.

CrossRef (http://dx.doi.org/10.1177/0011128701047002001)

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=The%20temporal%20relationship%20between%20police%20killings%20of%20civilians%20and%20criminal%20homicide%3perception%20theory&author=J.%20MacDonald&author=R.%20Kaminski&author=G.%20Alpert&author=A.%20Tennenbaum&jo172&publication\_year=2001)

Meyer, M. (1980). Police shootings of minorities: the case of Los Angeles. The Annals of the

American Academy of Political and Social Science, 452, 98-110.

CrossRef (http://dx.doi.org/10.1177/000271628045200110)

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Police%20shootings%20of%20minorities%3A%20the%20case%20of%20Los%20Angeles&author=M.%20Meyer&journal=The 110&publication\_year=1980)

Payne, B. K. (2001). Prejudice and perception: the role of automatic and controlled processes

in misperceiving a weapon. Journal of Personality and Social Psychology, 81, 1-12.

CrossRef (http://dx.doi.org/10.1037/0022-3514.81.2.181)

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Prejudice%20and%20perception%3A%20the%20role%20of%20automatic%20and%20controlled%20processes%20in%20mis 12&publication\_year=2001)

Payne, B. K., Lambert, A. J., & Jacoby, L. L. (2002). Best laid plans: effects of goals on

accessibility bias and cognitive control in race-based misperceptions of weapons. Journal of

Experimental Social Psychology, 38, 384-396.

CrossRef (http://dx.doi.org/10.1016/S0022-1031(02)00006-9)

<u>Google Scholar</u> (http://scholar.google.com/scholar\_lookup?title=Best%20laid%20plans%3A%20effects%20of%20goals%20on%20based%20misperceptions%20of%20weapons&author=BK.%20Payne&author=AJ.%20Lambert&author=LL.%20Jacoby&journal=J396&publication\_year=2002)

 $\label{lem:perrow} \mbox{Perrow, C. (1984)}. \mbox{\it Normal Accidents: Living With High Risk Technologies}. \mbox{\it Princeton, NJ:}$ 

Princeton University Press.

Plant, E. A., & Peruche, B. M. (2005). The consequences of race for police officers' responses

to criminal suspects. Psychological Science, 16, 180–183.

CrossRef (http://dx.doi.org/10.1111/j.0956-7976.2005.00800.x)

Google Scholar (http://scholar.google.com/scholar lookup?

title=The%20consequences%20of%20race%20for%20police%20officers%E2%80%99%20responses%20to%20criminal%20suspect 183&publication\_year=2005)

Plant, E. A., Peruche, B. M., & Butz, D. A. (2005). Eliminating automatic racial bias: making

race non-diagnostic for responses to criminal suspects. Journal of Experimental Social

Psychology, 41, 141–156.

CrossRef (http://dx.doi.org/10.1016/j.jesp.2004.07.004)

Google Scholar (http://scholar.google.com/scholar\_lookup?title=Eliminating%20automatic%20racial%20bias%3A%20making%2 diagnostic%20for%20responses%20to%20criminal%20suspects&author=EA.%20Plant&author=BM.%20Peruche&author=DA.%20156&publication\_year=2005)

Robin, G. D. (1963). Justifiable homicide by police officers. Journal of Criminal Law,

Criminology, and Police Science, 54, 225-229.

CrossRef (http://dx.doi.org/10.2307/1141171)

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Justifiable%20homicide%20by%20police%20officers&author=GD.%20Robin&journal=Journal%20of%20Criminal%20Law%229&publication\_year=1963)

Sherman, L., & Langworthy, R. (1979). Measuring Homicide by Police Officers. *The Journal of Criminal Law and Criminology*, 70, 546–560.

CrossRef (http://dx.doi.org/10.2307/1142641)

Google Scholar (http://scholar.google.com/scholar\_lookup?

 $title=Measuring \% 20 Homicide \% 20 by \% 20 Police \% 20 Officers \& author=L. \% 20 Sherman \& author=R. \% 20 Langworthy \& journal=The \% 25 Go \& publication\_year=1979)$ 

Solomon, R. M., & Horn, J. M. (1986). Post-Shooting Traumatic Reactions: A Pilot Study. In

J. T. Reese & H. A. Goldstein (Eds.), Psychological Services for Law Enforcement.

Washington, D.C.: U.S. Government Printing Office.

Google Scholar (http://scholar.google.com/scholar\_lookup?title=Post-

Shooting % 20 Traumatic % 20 Reactions % 3A % 20 A % 20 Pilot % 20 Study & author = RM. % 20 Solomon & author = JM. % 20 Horn & publication of the property of the property

Sorenson, J., Marquart, J., & Brock, D. (1993). Factors relating to killings of felons by police officers: a test of the community violence and conflict hypotheses. *Justice Quarterly*, 10(3), 417–440.

CrossRef (http://dx.doi.org/10.1080/07418829300091911)

Google Scholar (http://scholar.google.com/scholar\_lookup?

 $title=Factors\%20 relating\%20 to\%20 killings\%20 of\%20 felons\%20 by\%20 police\%20 officers\%3A\%20 a\%20 test\%20 of\%20 the\%20 comic 440 \&publication\_year=1993)$ 

Stone, C., Carter, Z., Belfiore, T., Bully-Cummings, E., Daughtry, H., Farrell, M., Gascon, G., Rice, A., Rice, L. & Hewitt, D. (2010). Reducing Inherent Danger: Report of the Task Force on Police-on-police Shootings. New York State Task Force on Police-on-Police Shootings.

Takagi, P. (1974). A garrison state in a "democratic" society. *Crime and Scholarly Justice*, 1, 27–33.

Google Scholar (http://scholar.google.com/scholar lookup?

 $title=A\%20 garrison\%20 state\%20 in\%20 a\%20\% E2\%80\%9 C democratic\%E2\%80\%9 D\%20 society\&author=P.\%20 Takagi\&journal=C133 \&publication\_year=1974)$ 

U.S. Department of Justice. (2001). *Policing and homicide*, 1976–98: Justifiable homicide by police, police officers murdered by felons (NCJ180987). Washington, DC: Bureau of Justice Statistics.

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Policing%20and%20homicide%2C%201976%E2%80%9398%3A%20Justifiable%20homicide%20by%20police%2C%20police

U.S. Department of Justice, Federal Bureau of Investigation, Killed in the Line of Duty: A Study of Selected Felonious Killings of Law Enforcement Officers (Washington, DC, 1992).

U.S. Department of Justice, Federal Bureau of Investigation, In the Line of Fire: Violence Against Law Enforcement (Washington, DC, 1997).

US-House-Committee-on-the-Judiciary-Subcommittee-on-Criminal-Justice. (1989). *Police Use of Deadly Force. Hearing...May 8, 1987.* Washington, DC: U.S. Government Printing Office.

upport

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Police%20Use%20of%20Deadly%20Force.%20Hearing%E2%80%A6May%208%2C%201987&publication\_year=1989)

Walker, S., Spohn, C., DeLone, M. (2004). *The Color of Justice: Race, Ethnicity and Crime in America*. 3rd edn. Belmont, CA: Wadsworth/Thompson

White, M. D. (2001). Controlling police decisions to use deadly force: reexamining the importance of administrative police. *Crime & Delinquency*, *47*(1), 131–151.

CrossRef (http://dx.doi.org/10.1177/0011128701047001006)

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Controlling%20police%20decisions%20to%20use%20deadly%20force%3A%20reexamining%20the%20importance%20of%20151&publication\_year=2001)

White, M. D. (2002). Identifying situational predictors of police shootings using multivariate analysis. *Policing: An International Journal of Police Strategies and Management*, *25*(4), 726–751.

CrossRef (http://dx.doi.org/10.1108/13639510210450659)

Google Scholar (http://scholar.google.com/scholar\_lookup?

title=Identifying % 20 situational % 20 predictors % 20 of % 20 police % 20 shootings % 20 using % 20 multivariate % 20 analysis & author=MD. % 20 police % 20 p

# Copyright information

© Springer Science+Business Media Dordrecht 2012

# About this article

#### **Publisher Name**

Springer Netherlands

**Print ISSN** 

1573-3750

Online ISSN

1572-8315

About this journal

**Reprints and Permissions** 

# Support

#### SPRINGER NATURE

© 2017 Springer International Publishing AG. Part of <u>Springer Nature</u>. Not logged in  $\cdot$  Not affiliated  $\cdot$  198.99.244.32